# Effect of Girl Child Puberty Factors on Academic Performance in Nine Years Basic Education Schools in Rwanda 

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#### Abstract

The schooling status of girls who are in puberty period can be affected by various factors like menstruation period, early marriage, sexual harassment, lack of self -esteem, early pregnancies and premarital sex as the academic performance depends on various aspects including students' behavior. The purpose of this paper therefore, was to examine the effect of girl child puberty factors on academic performance in Nine Years Basic Education (9YBE) in Gasabo district in Rwanda. The study was guided by correlation research design. The target population was 284 people including 4 head teachers, 80 teachers and 200 female students and Yamane formula was used to get the sample size of 168 respondents. Questionnaire and guided interview were used as data collection instruments and SPSS version 21 was used as assisting software for data management. Through data analysis, the findings show that there is a significance high degree of correlation between girl child puberty factors and academic performance where coefficient of correlation ( $\mathrm{r}=0.620$ and $\mathrm{P}=0.000<0.05$ ). The study also shows that $46.56 \%$ of girls participated in the study revealed that they get a challenge associated with class attendance, school drop outs and school grades. Through regression analysis, the study revealed that the puberty factors faced by girls can affect their academic performance at $38.4 \%$ as the expressed by the R square of 0.384 and the remaining $61.6 \%$ can be affected by other variables. The study concluded that the poor management of girls' puberty factors could directly reduce the level of academic performance.


Key Words: Puberty factors, academic performance, Nine Years Basic Education.

## I. INTRODUCTION

### 1.1 Background

The 69 million children do not attend primary school around the world, with girls accounting for 54 percent of those who do not finish primary school. Women are much more likely than males to drop out just before completing elementary school (UNICEF, 2010). In many places of the world, girls have a significantly lower likelihood of advancing to high school. World accounts more than 759 million adults lacking literacy skills, $2 / 3$ of them are women and over the last decade, it has actually risen slightly (UN, 2011). Poor and marginalized females are adversely impacted, with factors such as race, disability, and geographic location significantly reducing a girl's chances of enrolling and graduating from high school. Basic level of schooling and those who try to attend school, drop out even during their puberty (Vadera, 2007).

Puberty is a time of transition for all teenagers, but it is especially difficult for females who have not yet been equipped for the physical changes that can interfere with their education. In some regions of the world, two out of every three females are said to have had no clue of what was happening on when they started menstruation. It could have a number of severe consequences for their social and emotional health, including truancy, dropout, negative self, and poor academic achievement (UNESCO, 2014).

In Africa Like in Ghana, Adetunde et al.,(2008) revealed that all young women that are students in Africa confront comparable obstacles at least $10 \%$ of the population are considered to be nomadic or pastoralists. In comparison to the rest of the world, Sub-Saharan Africa makes up half of all other in children, according to UNESCO (2011). In Sub-Saharan Africa, boys have a GER of $41 \%$, while girls have a GER gross enrolment rate of $32 \%$. Sub-Saharan Africa has the least overall secondary attendance, according to the 2012 EFA worldwide report issued (UNESCO, 2012).

Regionally like in Kenya, Ngesu, Wachira, and Nyambisi (2012) indicated that low schooling productivity and under presentation in girls' education appear to stem from a combination of factors including a selection for boys' schooling, a loss of self-awareness, traditional gender roles, sexual assault, and other variables, school security is lacking. Teachers who are females indicate the role models' early marriage and
motherhood, as well as a lack of employment ambition and the sort of school attended (UNESCO, 2009; Omwogo, 2010 \& Oigara, 2011). Mixed-gender students do worse than single-gender students for a variety of purposes. Girls at mixed schools feel intimidated and frightened by male teachers and boys, their capability is diminished, and they are considered as female even when picking career courses, according to a study published in 2011 (Oigara, 2011).

Locally, the government of Rwanda in partnership with Plan International has done remarkable address for girl child through campaigns that include educating girls, especially high school girls, on different strategies in fighting pregnancies at early age, building confidence in young girls in future decision-making, helping vulnerable girls, who dropped out of school, going back to school through school feeding program as well as improving efficiency of the teenage girls’ safe rooms (Icyumba cy' Umukobwa) at school (Mutesi, 2018).Though much have been done to uplift the girl child education and academic performance, there are still some challenges associated with puberty such as less concentration, sexual harassment which affect their performance in academic as well as low transition rate and increased school dropout.

### 1.2. Statement of the Problem

Recently the efforts to improve girls' education nationally and internationally have significantly increased (UNESCO, 2005). The United Nations Girls' Education Initiative (UNEGI) was launched in Rwanda, in collaboration with FAWE Rwanda and national NGOs work in partnership with all global actors such as UNICEF, the World Bank, bilateral donors and other NGOs to promote girls’ education (MINEDUC, 2005). The socio-economic benefits of females' education are significant. Female literacy and education have been linked to improvements in crop output as well as maternity and youth welfare.

Despite the Rwanda government initiative to uplift girls' education and enhance smooth transition rate in school, there are still low rate of girls' transition in school characterized by low attendance hence affecting their academic performance (MINEDUC, 2012). Girls are the most affected from teenage pregnancies this has to enhance on building capacity in girls so they can cope with the issue (Mutesi, 2018). It is possible that they can find proper ways to prepare their future without passing through some challenges leading to pregnancies. According to (MINEDUC, 2017) statistics, 17000 girls under 18 years of age were pregnant in 2016.

According to MINEDUC (2006) examination results, due to puberty-related difficulties, girls' academic performance was significantly lower than boys' in 2006. For example, only 37.91 percent of girls passed the Primary Six exams in 2006, compared to 62.09 percent of boys. In 2006, just 31.7 percent of girls passed 9YBE (Tronc - Commun) exams, while 68.3 percent of boys passed.

In last 2019, the number of girls who sat for PLE was 154,339 whereas boys were 131, 748; hence, Girls performed on rate of $62.4 \%$ compared to Boys. For the ordinary level among 65,429 girls who sat for national exams only $46.4 \%$ of exams performed very well, whereas 54,503 boys (REB, 2019). In Gasabo District, only 9, 226 girls sat for PLE and they performed on rate of $59.6 \%$ compared to boys whereas at Ordinary level among 623 girls who sat for national exam, they performed at $48.9 \%$ compared to boys (Gasabo District, 2019). It is against this defective the researcher carried out the study associated with girl child puberty and academic performance in 9YBE schools in Rwanda.

### 1.3. Purpose of the Study

The general purpose of this study was determine whether the girl child puberty factors have the measurable effect on academic performance in 9YBE Gasabo District Rwanda.

### 1.4 Objective of the Study

To determine the effect of girl child puberty factors on academic performance in 9YBE of Gasabo District in Rwanda.

### 1.5 Research Question

What is the effect of girl child puberty factors on academic performance in 9YBE in Gasabo District in Rwanda?

## II. LITERATURE REVIEW

### 2.1. Importance of Girl Child Education

People say, when you educate a girl, you educate a nation. Educating girls yield impressive social benefits for the current generation and those to come (Thompson, 2013). Rwanda's government has also made an amount of global agreements demonstrating its responsibility to respect human rights and progressive ideals. The Convention on the Rights of the Child (CRC), Education for All, and the Millennium Development Goals are the three most important international commitments for the Ministry of Education (MINEDUC) (MDG).

The agreement commits participants to ensure that all toddler's right to education is achieved, and (MDGs) set a goal of ubiquitous basic education complete and sexual equality (in chances and results) by 2015. Economic Development Poverty Reduction Strategy -EDPRS Rwanda's Economic Development Poverty

Reduction Strategy has led to an Education Sector Policy commitment to ensure Universal Primary Enrolment by 2010 and Basic Education for all by 2015 and Gender balance in net primary enrolment had all been attained by 2000, and girls now have a little higher rate of $87 \%$ than boys, who have a rate of $85 \%$ (UNDP, 2011).

Rwanda has thus met the School for All goal of eradicating gender differences in elementary education by 2005 in terms of attendance. Nevertheless, the objective underlines the importance of not just having girls from school, as well as of paying attention to their needs in terms of teaching techniques, curricular, and student behavior. UNICEF (2014) report indicates that, investing in the future of a country's females is among the most substantial gains a country can make. Education for girls contributes to more organizational commitment, greater households, improved services, child development, and appropriate organizational engagement.

Kadenyi (2011) stated that girls' education has been vital in the promotion of social and economic development of a nation. This is because a well-educated health mother is likely to get healthy human resources for the development of a healthy nation. World Bank (2012) many girls do not have access to education despite the efforts to push them forward. It has been identified that child labor, poverty and lack of sponsorship broken homes, truancy, and engagement of children as house helps as the factors that hinder children access to education (Okeke et al., 2012). International humanitarian organizations and feminism activists have continued to argue on Taleban Regime in Afghanistan who have banned the girls to go to school (UN,2012). Because of customs, deprivation, terror, and abuse, ladies still represent for $60 \%$ of the projected 113 million out-of-school youth (Guttmann, 2019).

In Rwanda, the report from (USAID, 2014) identifies that, although children are finishing primary school performance for girls remain a challenge. On average a girl would come to school for two weeks in a month this was greatly affecting their performance due to challenges they face during menstrual periods (Mbonigaba, 2016).

In various African countries, including the Democratic Republic of Congo, Ghana, Nigeria, Somalia, South Africa, Sudan, and Zimbabwe, professors have demanded sexual favors in exchange for excellent grades, according to a report. Boys are the most commonly mentioned attackers, and their actions involve oral abuse, cartooning, harassment, punching, and sexually assaulting (CIET AFRICA, 2016).

According to human right watch report conducted in Tanzania, several Tanzanians see child marriage as a way to ensure financial stability for themselves and their girls. The provision of a dowry to the girl's mother by the groom is a major property for many parents to married off their girls. Several females consider marriage as a route out of hardship, violence, and mistreatment. Children doing various jobs in Tanzania might be linked to a major increase in marriage at a younger age, as girls who are subjected to rape and abuse at work see marriage as a route out of their misery (HRW, 2014).

### 2.2. Sexual Harassment

As per Ruto (2019), sexual harassment is defined as engaging a kid in sexual contact because she does not completely understand, seems unable to agree to, is not perfectly committed for, or is opposed to social expectations. In their study of challenges experienced by females at all educational levels in Kenya, Kimani, Maina, and Wainaina (2010) found that the most common types of sexual harassment in Kenya schools include verbal, contact of parts of the body, and aggravating facial expressions. Sexual assault does not have to be between males and women (Forgery, 2012).

The study carried out in Tanzania schools has revealed cases of sexual abuse and harassment of female students by their males. The study has also pointed out that often the perpetrators are fellow male classmates as well as teachers (Mgalla et.al., 2018). The study on teacher professionalism and professional abuse towards education development in Tanzania by Tweve (2011) shows that students experience a wide range of effects from sexual harassment that impact academics that is to say, decreased participation in class, avoiding to study in groups, desire to change school, avoiding library and so on.

### 2.3. Health problems

Healthy problems and absenteeism are some of the effects of puberty on girls where by during this stage girl between 9 up to 18 years begin menstruations where by sometimes they tend to experience health discomfort causing absenteeism because of lack of school sanitation facilities. Bodat et al., (2013) said that girls used to remain home during menstruation period due to menstrual discomfort, abdominal pain and lack of sufficient materials to use during menstruation.

Sudeshna \& Aparajita (2012 reported that girls tend to stay at home during their menstruation because staining their clothes would cause them stress and instability (Shann, et al., 2013). conducted a study in Tanzania and Uganda discovered that, lack of sanitary pads prevents girls from attending school during menstruation and even when pads are available, there are no privacy and adequate sanitation which make it hard for them to change pads.

### 2.4. Poverty

It has been discovered that girls who come from poor background tend to experience some difficulties during puberty where parents do not afford to provide their sanitary facilities and other school requirements such as school uniform which prompt most of the girls to drop out of school.

The study conducted in Kenya by (Achoka et al., 2013) that parents' failure to provide their girls necessities has enabled girls to miss some lessons and decide to remain home and get involved in acts of sexual promiscuity with members of the opposite sex in order to fulfill their needs. UNICEF (2019) women and girls tend to be affected more with poverty compared to men. Girls from the age of 11 to 16 engage in sexual behavior and they are able to stand high chances of contracting sexual transmitted diseases, HIV and unplanned pregnancies.

### 2.5. Early marriages

In some sub-Saharan countries when a girl reaches puberty is perceived to be a grown up daughter hence ready for marriage ranks Tanzania as the country which has got the highest rate of early child marriage that 4 out 10 girls get married before the age of 18. Tanzanian girls are always considered to be ready for marriage when they reach puberty (UN,2012). MDGS global goals of education for all EFA, still there are gender disparity as regards to some cultural practices being practiced in sub Saharan African countries.

HRW (2014) conducted a study among Maasai, Kurya and Gogo ethnic groups Female Genital Mutilation (FGM) contribute to child marriage in some communities at the age of 10 to 15 years girls are ready for marriage. Educated women tend to have healthy children and decrease in high mortality rate has been due to the influence of female education (Gakidou et al, 2010). A kid for whom the mother could even read has a $50 \%$ higher chance of living significantly longer lives than a child for whom the mother cannot. That's because key to understanding awareness about the effects of vaccination and appropriate procedures for coping with inadequate public health services, thereby reducing the spread of communicable diseases (Desai \& Alva, 2016).

In Less Developed Countries like sub Saharan Africa, south Asia the number of women who have secondary education, their kids are more likely to be vaccinated than when their mothers simply have a primary education. The presence of a mother is critical for the well-being of children. In Tanzania, losing a mother parent has a detrimental impact on a child's growth and education completion (Beegle \& Dercon, 2018).

Research conducted by human rights indicates that countries where female is highly educated are able to withstand the negative influence of industrial shocks on their economic output (Blankespoor et al, 2012). In Guinea and Pakistan, a wife's schooling has a significant and positive influence on her girls' education (Glick \& Sahn, 2016, Holmes, 2013).

### 2.6 Lack of Self-esteem

Self-esteem encompasses beliefs and Triumph, sadness, pride, and humiliation are some of the emotions that people experience (Coopersmith, 2015; Lamborn \& Mounts, 2011) Self-esteem refers to our favorable or negative assessments of ourselves, as well as how we feel about ourselves. Self-consciousness is also directly linked to one's self-esteem (Schacter, Gilbert; Wegner, Daniel, 2019). Self-esteem, according to Olsen, Breckler, and Wiggins (2008), is an attitude that a person has that represents their assessments of their own merit. Morris Rosenberg and social scientists described self-esteem as a sense of personal value or merit in the mid-1960s. Branden (2010) described self-esteem as the feeling of being capable of dealing with life's essential obstacles.

Branden defined self-esteem as the combination of consciousness (a sense of personal capability) and self-respect (a feeling of personal worth). It occurs as a result of everyone's implicit assessment of their ability to handle life's obstacles, comprehend and solve difficulties, as well as their entitlement to pleasure and dignity (Branden, 2010). The significance of consciousness stems from the fact that it is concerned with ourselves, our appearance, and our perception of self-worth. As a result, it has an impact on how we are and act in the world, as well as how we relate to others. The impact of self-esteem is felt in every aspect of our thinking, feeling, deciding, and doing.

### 2.7 Early Pregnancy

Adolescent marriage is a significant issue because of the potential detrimental effects on the mother's and child's health, as well as the serious adverse individual and collective repercussions of curtailing a girl's education and community destruction of personal resources. In our study of adolescent girls in rural western Kenya, 23.3 percent had previously been pregnant (Mdodo et al., 2016). Approximately three of teen girls polled who a pregnancy in the previous 12 months had said it was an unplanned pregnancy. For this group, Infectious disease is a severe threat (Amornkul et al., 2019; Mdodo et al., 2016).

The 3.5 percent of sexual activity adolescent girls tested positive for HIV. In multivariate analysis, older age group, ever allowed to marry, lower educational attainment, and domestic violence were all linked to a history of pregnancy among sexual activity teenagers. For young adolescents (aged 17-19 years), the odds of
having had a previous pregnancy were almost four times higher than for younger teens (aged 13-14 years). Other research has reported that the proportion of teenagers who become pregnant rises dramatically as they get older.

Furthermore, cultural customs like as living situations and events where youth are not carefully controlled, can contribute to dangerous sexual practices (Juma et al., 2014; Njue, Voeten, \& Remes, 2012). Furthermore, the aging process, in which the girl becomes more autonomous, eventually moving out of her parents' home, is likely to play a significant effect in the rising frequency of pregnancy as she grows older. The modified chances of having a history of pregnancy were roughly nine times higher in this study for individuals whose sexual preference was ever married/cohabiting relative to those whose sexual preference was never married/cohabiting.

### 2.8. Academic Performance

Chamorro (2005) academic performance is explained as performance in a classroom setting. It describes how pupils approach their academics and how they cope with or complete the tasks assigned to them. Academic performance is a crucial technique for adolescents to learn about their talents, capabilities, and competences, which are vital in forming professional goals (Lent et al., 2016). Educational attainment relates to how well a student performs in school, as well as his or her achievement or success. Academic achievement is the direct result of schooling - how well a student has met his educational objectives. According to Baharudin et al. (2014), educational achievement is the most critical aspect of teenagers' overall life adaption.

Educational attainment of teenagers is a crucial feature of their entire development in a progressively competitive and highly world because it qualifies them for the obstacles they will face in their lifetime, in generally, and in their career, in specific (Abesha, 2012). Educational attainment of teenagers is a crucial feature of their entire development in a progressively competitive and highly world because it qualifies them for the obstacles they will face in their lifetime, in generally, and in their career, in specific (Abesha, 2012).

Zook and Repinski (2014) discovered that families' academic engagement is linked to their children's academic achievement, which is linked to their career and educational goals. The cultural and intellectual direction of the family setting was found to be the best determinant of Grade Point Average (GPA) in a study by Whitehead and Deborah (1991). Shaljan (2010) found that family socioeconomic position, family factors, parenting, and family togetherness all have significant positive advantages depend on children's school performance in Canada. Based on all of this data, a study was conducted to determine the impact of relatives on participants' academic success.

## III. RESEARCH METHODOLOGY

This paper was guided by correlation research design to determine the effect of girls' puberty factors academic performance in Nine Years Basic Education in Gasabo District in Rwanda. The target population was 284 people including 4 head teachers, 80 teachers and 200 female students and provided the sample size of 168respondnets got using Yamane formula. Stratified and simple random sampling techniques were used during data collection. Questionnaire and guided interview were used as data collection instruments and SPSS version 21 was used as assisting software for data management.

## IV. FINDINGS AND DISCUSSIONS

This paper was developed to determine the effect of girls' puberty factors academic performance in Nine Years Basic Education (9YBE) in Gasabo District in Rwanda.

### 4.1 Girls child puberty factors in Nine Years Basic Education in Gasabo district

The girls child puberty factors was measured in terms of Menstruation period faced by girls, sex violence, Sexual as desire which sometime times leads to early marriage, sexual harassment and lack of selfesteem and poor parental care which sometimes leads to premarital sex.

Table1: students on girls' child puberty factors in 9YBE

| Statement | SA | A |  |  |  |  | N |  | D |  | SD |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | Freq | $\%$ | freq | $\%$ | Freq | $\%$ | freq | $\%$ | Freq | $\%$ |  | Std |
| Menstruation <br> period as a <br> factor of | 44 | 37.6 | 56 | 47.9 | 5 | 4.3 | 7 | 6.0 | 5 | 4.3 | 1.91 | 1.02 |
| puberty |  |  |  |  |  |  |  |  |  |  |  |  |
| Sex violence is <br> a puberty <br> factor in 9YBE | 30 | 25.6 | 61 | 52.1 | 13 | 11.1 | 9 | 7.7 | 4 | 3.4 | 2.11 | 0.99 |

Effect of Girl Child Puberty Factors on Academic Performance in Nine Years Basic ..

| Early marriage <br> is a puberty | 33 | 28.2 | 46 | 39.3 | 22 | 18.8 | 9 | 7.7 | 7 | 6.0 | 2.24 | 1.13 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| factor |  |  |  |  |  |  |  |  |  |  |  |  |
| Sexual as a <br> desire as a |  | 13.7 | 72 | 61.5 | 19 | 16.2 | 7 | 6.0 | 3 | 2.6 | 2.22 | 0.85 |
| puberty factor |  |  |  |  |  |  |  |  |  |  |  |  |
| in 9YBE | 28 | 23.9 | 62 | 53.0 | 13 | 11.1 | 11 | 9.4 | 3 | 2.6 | 2.14 | 097 |
| Sexual <br> harassment as |  |  |  |  |  |  |  |  |  |  |  |  |
| a puberty |  |  |  |  |  |  |  |  |  |  |  |  |
| factor |  |  |  |  |  |  |  |  |  |  |  |  |
| Lack of self- <br> esteem as a <br> puberty factor | 31 | 26.5 | 56 | 47.9 | 16 | 13.7 | 12 | 10.3 | 2 | 1.7 | 2.13 | 0.98 |
| in 9YBE <br> Peer group <br> relationship is | 23 | 19.7 | 69 | 59.0 | 12 | 10.3 | 11 | 9.4 | 2 | 1.7 | 2.15 | 0.90 |
| a puberty <br> factor |  |  |  |  |  |  |  |  |  |  |  |  |
| Poor parental <br> care | 16 | 13.7 | 66 | 56.4 | 23 | 19.7 | 11 | 9.4 | 1 | 0.9 | 2.27 | 0.85 |
| Premarital sex <br> as a puberty <br> factor | 29 | 24.8 | 7 | 6.0 | 9 | 7.7 | 68 | 58.1 | 4 | 3.4 | 2.05 | 0.94 |

The Table1, indicates the responses provided by girls students studying in 9YBE in Gasabo district in Rwanda, where they provided their responses related to the availability of puberty factors in 9 YBE and 85.5 percent of students agreed that they meet menstruation period and perceived at the mean of 1.91 and the standard deviation of 1.02 while 77.7 percent of students accepted that sexual violence is considered as the puberty factor in 9YBE where they perceived at the mean of 2.11 and 0.99 of standard deviation as well as 67.5 percent of students confirmed on early marriages which can be caused by puberty ages and perceived at the mean of 2.24 and standard deviation of 1.13. This indicates that majority of students faced menstruation period and agreed that sexual violence are considered to be factors associated with puberty which can significantly affect the level of academic performance in 9YBE. Mock (2019) revealed that when a girl is in menstruation period, she faces different challenges which affect the negatively the performance of schooling activities. Mock (2019) also added that also in puberty period, girls get violated which also discourage the learning capacity.

However, 75.2 percent of students indicated that sexual desire is considered as the puberty factor in 9 YBE where they provided their perception at the mean of 2.22 and 0.85 of standard deviation. This shows that majority of child girls get sexual desire which can hinder their schooling effectiveness. Brotto (2014) revealed that sexual desire is associated with hunger and thirst which can be observed as biological driven affected by activation and inhibition of neural substrates.

Sexual harassment is considered as puberty factors where 76.9 percent of students agreed and perceived at the mean of 2.14 and the standard deviation of 0.97 while 74.4 percent of students indicated that some time, they meet with self-esteem in their social life where they perceived this statement at the mean of 2.13 and the standard deviation of 0.98 . Though, 78.7 percent of students agreed that there is a peer group relationship as a puberty factors in 9YBE and perceived at the mean of 2.15 and 0.90 of standard deviation. According to Kimani, Maina and Wainaina (2010), the problems faced by girls at school and outsides, mostly are associated with sexual harassment. Foregery (2012) also added that sexual harassment does' not only happen on people of opposite sex, it depends on to whom the harassment is towards too.

On the other hand, 70.1 percent of students stated that most of the time, they meet poor parental care where they perceived at the mean of 2.27 and standard deviation of 0.85 as well as 30.8 percent of students indicated that premarital sex, is also taken as one of the puberty factors and perceived at the mean of 2.05 and the standard deviation of 0.94 . This implies that the lack of parental care can lead children to negative attitudes and this also affect schooling productivity. According to Achoka et al. (2013), parents' failure to provide their girls necessities has enabled girls to miss some lessons and decide to remain home and get involved in acts of sexual promiscuity with members of the opposite sex in order to fulfill their needs.

Figure 1: Extent of girls' puberty factors in 9YBE in Gasabo District


The figure1, indicates the perception from teachers on the extent of girl child puberty factors in 9YBE in Gasabo district where 6.4 percent of teachers indicated such puberty factors were at low extent while 31.9 percent stated that they were at moderate and high extent for the remaining 61.7 percent.

There were four school head teachers of 9YBE in schools located in Gasabo district who were interviewed. The findings from the interviews given to them were categories in the theme related to the specific objective of the study "girls' puberty factors in 9YBE in schools located Gasabo district". The school head teachers responded that "the girl's puberty factors are like having menstruation period, getting early marriage as well as sexual harassment and lack of self-esteem, getting early pregnancies and premarital sex". They also added that most of students studying in 9YBE are affected by such factors.

### 4.2 Girls' academic performance in 9YBE in Gasabo District

The academic performance of girls in puberty factors was measured in terms of school dropout, class attendance, school grades and awareness in participation of school activities.

Table2: The level of students' academic performance in 9YBE

| Statement | SA |  | A |  | N |  | D |  | SD |  | Mean | Std |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Freq | \% | freq | \% | Freq | \% | Freq | \% | freq | \% |  |  |
| Increased school drop out | 8 | 6.8 | 21 | 17.9 | 10 | 8.5 | 52 | 44.4 | 26 | 22.2 | 2.43 | 1.21 |
| Low class attendance to girls | 18 | 15.4 | 52 | 44.4 | 14 | 12.0 | 20 | 17.1 | 13 | 11.1 | 2.64 | 1.25 |
| Getting low grades | 19 | 16.2 | 47 | 40.2 | 15 | 12.8 | 21 | 17.9 | 15 | 12.8 | 2.71 | 1.29 |
| Low transition to girls' students | 18 | 15.4 | 42 | 35.9 | 14 | 12.0 | 33 | 28.2 | 10 | 8.5 | 2.79 | 1.25 |
| Getting low marks to girls | 19 | 16.2 | 39 | 33.3 | 9 | 7.7 | 35 | 29.9 | 15 | 12.8 | 2.90 | 1.34 |
| Increased girls' absenteeism | 18 | 15.4 | 47 | 40.2 | 7 | 6.0 | 36 | 30.8 | 9 | 7.7 | 2.75 | 1.26 |
| Increased repetition rate to girls | 14 | 12.0 | 19 | 16.2 | 7 | 6.0 | 32 | 27.4 | 45 | 38.5 | 2.97 | 1.34 |
| Low girls' participation in class activities | 20 | 17.1 | 35 | 29.9 | 5 | 4.3 | 36 | 30.8 | 21 | 17.9 | 3.03 | 1.42 |

The Table2, provided their perception of the level of students' academic performance in 9YBE in Gasabo district where 24.7 percent of students agreed that there is school drop outs in 9YBE where they perceived at the mean of 2.43 and the standard deviation of 1.21 as well as 59.8 percent of students agreed that there is low class attendance to girls and perceived with the mean of 2.64 and 1.25 of the standard deviation. This means that class attendance and school dropout can significantly be affected by child management especially during puberty period and this affects negatively the level of students' academic performance. Basit (2010) supported that various educational stakeholders need to work collaboratively so as to fight against school dropout especially among adolescent girls and enhance the level of classroom attendance.

The study shows that 56.4 percent of students agreed that they get low grades and perceived at the mean of 2.71 and the standard deviation of 1.29 while 51.3 percent of students, indicated that there is low transition of girls in 9YBE with the mean of 2.79 and 1.25 of standard deviation. According to Kimani, Kara and Njagi (2013), the lower level of school transition to both boys and girls reduce the quality of education as well as youth skills, values and knowledge and also other societal values norms. This means that the low level of school transition demotivate the significance level of education.

Moreover, 49.5 percent of students indicated that, they get low marks compared to boys where they perceived at the mean of 2.90 and the standard deviation of 1.34 while 55.6 percent of girls' students agreed on the increased girls' absenteeism with the mean of 2.75 and 1.26 of the standard deviation. This shows that girls are the one to be influenced by puberty period rather than boys that also reduce the effectiveness and schooling like school completion. According to Baharudin et al. (2010), educational achievement is likely the most important aspect of an adolescent's overall adaptability to life that also necessitates good performance both in and out of schooling.

However, 28.2precnt of girls' students agreed on the increased girls' repetition rate at the mean of 2.97 and the standard deviation of 1.34 while 47.0 percent of girls' students agreed on low girls' participation in class activities where they perceived on this statement at the man of 3.03 and the standard deviation of 1.42 . This means that the poor management of school of puberty period can reduce the level of class participation among girls and increase the repetition rate which leads to the poor quality of education among girls. According to Abesha (2012) students at adolescent age need to be managed regular and guided in a positive way in order to improve the school productivity and their career development which also improve the socio-economic status of the country.

Teachers were asked on how girl student academic performance is stated in 9YBE in Gasabo district. They responded indicated that the academic performance in 9 YBE is determined by class attendance, students' grades as well as students' transition.


The figure2, indicate the perception from teachers on the extent of girl academic performance in 9YBE in Gasabo district where 34.0 percent of teachers indicated that girls academic performance were at low extent while 30 percent stated that they were at moderate and high extent for the remaining 36 percent.

The guided interview was given to four head teachers of 9YBE in Gasabo district where they were interviewed on "girl students' academic performance in 9YBE in Gasabo district" where they indicated that the

Effect of Girl Child Puberty Factors on Academic Performance in Nine Years Basic ..
academic performance of girls in 9YBE is determined by class attendance, school drop outs as well as students' grades and students transition.

### 4.3 The effect of girl child puberty on academic performance

Table3: Model summary of girl child puberty and academic performance

| Model | R | R Square | Adjusted <br> R Square | Std. Error of the Estimate | Change Statistics |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | R Square Change | $\begin{gathered} \mathrm{F} \\ \text { Change } \\ \hline \end{gathered}$ | df1 | df2 | Sig. F Change |
| 1 | . $620^{\text {a }}$ | . 384 | . 379 | . 71140 | . 384 | 71.126 | 1 | 114 | . 000 |

Primary (2020), a. Predictors: (Constant), Girls child puberty

The Table3, it indicates the model summary of girl child puberty factors and academic performance where the findings stated that $\mathrm{y}=\beta+\alpha_{1} \mathrm{X}_{1}+\alpha_{2} \mathrm{X}_{2}+\alpha_{3} \mathrm{X}_{3}+\varepsilon$ thus y : dependent variable as children' reasoning, x : independent variable as physical learning environment and R Square was 0.384 .

It means that the independent variable (girl child puberty factors) explained 38.4 percent variations from expected and actual results of dependent (academic performance). This shows a good fit of regression equation where academic performance can be affected by puberty factors. On the other hand, it is clear that girl child puberty factors are able to affect the level of academic performance at $38.4 \%$ and the remaining $61.6 \%$ could be affected by other variables. Vadera (2017) indicated that revealed that significantly affect mostly the school performance of students aged from 15years to 18 years old.

## V. CONCLUSION

The study concludes that there is a statistical significant high negative relationship between girls' puberty factors and academic performance. This also reveals that negative change of girls' puberty factors could affect negatively their level of academic performance.

## REFERENCES

[1]. Abesha, M.J. (2010). Strategies Employed by Secondary School Principals to Improve Academic Performance in Embu West District. Kenyatta University. Retrieved April 25,2018from http://irlibrary.ku.ac.ke/bitstream/handle/123456789/930/Mwaura\%2C\ James\ Maina. pdf? Sequence=3
[2]. Ackers, J. (2001). Identifying and addressing the causes of declining participation rates in Kenyan primary schools. International Journal of Educational Development. Nairobi. Kenya.
[3]. Admassie, A. (2003). Child labour and schooling in the context of subsistence rural economy: can they be compatible? International Journal of Educational Development. Nairobi. Kenya
[4]. Ainsworth, M. Beegle, K. \& Koda, G. (2005). The impact of adult mortality and parental deaths on primary schooling in North-Western Tanzania. The Journal of Development Studies, Dar es- salam. Tanzania
[5]. Al Samarrai, S. \& Peasgood, T. (1998). Educational attainments and household characteristics in Tanzania. Economics of Education Review, 17(4): 395-417.
[6]. Alderman, H., Behrman, J.R., Lavy, V. \& Menon, R. (2001). Child health and school enrollment: a longitudinal analysis. The Journal of Human Resources, 36(1): 185-205.
[7]. Ames, P. (2004). Schooling for girls in rural Peru. id21 [Internet]. Available from http://www.id21.org/id21ext/insightsedu3art7.html [Accessed on 10th August, 2019
[8]. Anderson, K.G. (2005). Relatedness and investment in children in South Africa. Human Nature. University of Pretoria. South Africa
[9]. Andvig, J.C., Canagarajah, S. and Kielland, A.Child Labor in Africa: The Issues. http://info.worldbank.org/etools/docs/library/74184/winter2019/proceedings/pdfpapers/mod10ja.pdf [Access on 16th, August 2019]. World Bank. Washington DC. USA.
[10]. Annor, J. (2002). Implementing government policy for supporting technology use by persons with disability. Paper presented to the Center on Disabilities Technology and Persons with Disabilities Conference 2002, California State University, Northridge.
[11]. Baharudin, J.H. (2014). Factors Affecting Student's Academic Performance: A Case Study of Public Secondary Schools in Ilala District, Dar-es-salaam, Tanzania. University of Tanzania.http://repository.out.ac.tz/1732/1/JAMILLAH__MAGANGA-Dissertation 2016-Final.pdf
[12]. Ballara, M. (2001). Women and Literacy: Women Development Series. London: Zed books
[13]. Bernheim, D. \& Garrett, D. (2003). The effects of financial education in the workplace: Evidence from a survey of households. Journal of Public Economics, 8(7), 1487-1519.
[14]. Bikhchandani, S., Hirshleifer, D., Welch, I., 1992. A theory of fads, fashion, custom, and cultural change as informational cascades. Journal of Political Economy 100, 992-1026.
[15]. Chamorro, P. (2015). Low Academic Achievement: Causes and Results. Theory and Practice in Language Studies, 5(11), 2262-2268.
[16]. Dubuis, J.M (2018). Physical changes of puberty. 10th Postgraduate Course for Training in Reproductive Medicine and Reproductive Biology. Geneva Foundation for Medical Education and Research.
[17]. Forooq, F. (2011). The Effect of Family Poverty on Children's Academic Achievement: Parental Discussion and Neighborhood Poverty as Mediating Variables. The State University of New Jersey. from https://rucore.libraries.rutgers.edu/rutgers-lib/33486/PDF/1/play/ retrieved on January 15, 2020
[18]. GAGE, (2017). Capabilities of adolescent girls in Rwanda. Kigali. Rwanda.
[19]. Ibrahim, J.M. (2014). Survey on the Factors Influencing the Student's Academic Performance. International Journal of Emerging Research in Management and Technology,5(6),30-36.from https://www.ermt.net/docs/papers/Volume_5/6_June2016/V5N6-142.pdf
[20]. Lent, P.O. (2016). Determinants of Differential Kenya Certificate of Secondary Education Performance and School Effectiveness in Kiambu and Nyeri Counties, Kenya. Kenyatta University.
[21]. MINEDUC (2008). Nine Years Basic Education Policy. Kigali. Rwanda.
[22]. Network, N. E. C. C. R. (1999). Child care and mother-child interaction in the first 3 years of life. Developmental Psychology, 35(6), 1399-1413.
[23]. Newland, R. P., Crnic, K. A., Cox, M. J., \& Mills-Koonce, W. R. (2013). The family model stress and maternal psychological symptoms: Mediated pathways from economic hardship to parenting. Journal of Family Psychology, 27(1), 96.
[24]. Obradović, J., \& Hipwell, A. (2010). Psychopathology and social competence during the transition to adolescence: The role of family adversity and pubertal development. Development and Psychopathology, 22(03), 621-634.
[25]. Obradović, J., Bush, N. R., \& Boyce, W. T. (2011). The interactive effect of marital conflict and stress reactivity on externalizing and internalizing symptoms: The role of laboratory stressors. Development and Psychopathology, 23(01), 101-114.
[26]. Obradović, J., Bush, N. R., Stamperdahl, J., Adler, N. E., \& Boyce, W. T. (2010). Biological sensitivity to context: The interactive effects of stress reactivity and family adversity on socioemotional behavior and school readiness. Child Development, 81(1), 270-289.
[27]. Omede A. A. \& Agahiu G. E. K. (2016). The Implications of Girl-Child Education to Nation Building in the 21st Century in Nigeria. Global Journal of Human-Social Science: G Linguistics \& Education. 16 (3)125-146.
[28]. Pianta, R. C. (1994). Rating scales for parent-child interaction in preschoolers: University of Virginia. USA.
[29]. Raftery, A. E. (1995). Bayesian model selection in social research. Sociological Methodology, 25(5), 111164.
[30]. Reese, B. M. (2014). Correlates of adolescent and young adult sexual initiation patterns. Perspectives on Sexual and Reproductive Health, 46(4), 211-221.
[31]. Reindl, M., Reinders, H., \& Gniewosz, B. (2013). The change of autonomy striving, perceived parental control, and perceived quantity of conflicts in adolescence. Zeitschrift Fur Entwicklungspsychologie Und Padagogische Psychologie, 45(1), 14-26.
[32]. Repetti, R. L., Taylor, S. E., \& Seeman, T. E. (2002). Risky families: Family social environments and the mental and physical health of offspring. Psychological bulletin, 128(2), 330-366.
[33]. Rohner, R. P., Khaleque, A., \& Cournoyer, D. E. (2005). Parental acceptance-rejection: Theory, methods, cross-cultural evidence, and implications. Ethos, 33(3), 299-334.
[34]. Romeo, R. D. (2005). Neuroendocrine and behavioral development during puberty: A tale of two axes. In L. Gerald, Vitamins \& Hormones. Academic Press 7(1), 1-25.
[35]. Rosenfield, R. L., Lipton, R. B., \& Drum, M. L. (2009). Thelarche, pubarche, and menarche attainment in children with normal and elevated body mass index. Pediatrics, 1(2)1-13
[36]. Ruto D. (2019). Determinants of Poor Academic Performance of Secondary School Students in Sumbawanga District, Tanzania. Sokoine University of Agriculture. Morogoro Tanzania.http://www.suaire.suanet.ac.tz:8080/xmlui/bitstream/handle/123456789/622/David\%2 0Melack.pdf? sequence=1\&isAllowed retrieved on 13 January 2020.
[37]. Sameroff, A. (2010). A unified theory of development: A dialectic integration of nature and nurture. Child Development, 81(1), 6-22.
[38]. Shanahan, L., McHale, S. M., Crouter, A. C., \& Osgood, D. W. (2007). Warmth with mothers and fathers from middle childhood to late adolescence: Within- and between-families' comparisons. Developmental Psychology, 43(3), 551-563.
[39]. Skinner, E., Johnson, S., \& Snyder, T. (2005). Six dimensions of parenting: A motivational model. Parenting: Science and Practice, 5(2), 175-235.
[40]. Spear, L. P. (2000). Neurobehavioral changes in adolescence. Current Directions in Psychological Science, 9(4), 111-114.
[41]. Spear, L. P. (2000). The adolescent brain and age-related behavioral manifestations. Neuroscience \& Biobehavioral Reviews, 24(4), 417-463.
[42]. Steiger, J. H. (2010). Structural model evaluation and modification: An interval estimation approach. Multivariate Behavioral Research, 25(2), 173-180.
[43]. Steinberg, L. (2001). We know some things: Parent-adolescent relationships in retrospect and prospect. Journal of Research on Adolescence, 11(1), 1-19.
[44]. Steinberg, L. (2005). Cognitive and affective development in adolescence. Trends in Cognitive Sciences, 9(2), 69-74.
[45]. Steinberg, L. (2007). Risk taking in adolescence: New perspectives from brain and behavioral science. Current Directions in Psychological Science, 16(2), 55-59.
[46]. Steinberg, L. (2008). A social neuroscience perspective on adolescent risk-taking. Developmental Review, 28(1), 78-106.
[47]. Steinberg, L. (2008). Reciprocal relation between parent-child distance and pubertal maturation. Developmental Psychology, 24(1), 122-128.
[48]. Steinberg, L., \& Monahan, K.C. (2007). Age differences in resistance to peer influence. Developmental Psychology, 4(3), 1531-1543.
[49]. Steinberg, L., \& Morris, A. S. (2001). Adolescent development. Journal of Cognitive Education and Psychology, 2(1), 55-87.
[50]. Steinberg, L., \& Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescence. Child Development, 57(4), 841-851.
[51]. Steinberg, L., Blatt-Eisengart, I., \& Cauffman, E. (2006). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful homes: A replication in a sample of serious juvenile offenders. Journal of Research on Adolescence, 16(1), 47-58.
[52]. Steinberg, L., Lamborn, S. D., Darling, N., Mounts, N. S., \& Dornbusch, S. M. (2004). Overtime changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful Families. Child Development Journal, 65(3), 754-770.
[53]. Ryan, A. S. (2002). National estimates of the timing of sexual maturation and racial differences among US children. Pediatrics, Illinois. USA.
[54]. Tilton-Weaver, L. C., Burk, W. J., Kerr, M., \& Stattin, H. (2013). Can parental monitoring and peer management reduce the selection or influence of delinquent peers? Testing the question using a dynamic social network approach. Developmental Psychology. St. Petersburg. Russia
[55]. Tolman, D. L. (2011) Normative sexuality development in adolescence: A decade in reviewe, 2000-2009. Journal of Research on Adolescence, 21(1), 242-255.
[56]. Tucker, L., \& Lewis, C. (2013). A reliability coefficient for maximum likelihood factor analysis. Psychometrika, 38(1), 1-10.
[57]. Van der Giessen, D., Branje, S. J. T., Frijns, T., \& Meeus, W. H. J. (2013). Dyadic variability in motheradolescent interactions: Developmental trajectories and associations with psychosocial functioning. Journal of Youth and Adolescence, 42(1), 96-108.
[58]. Weinberger, D. A., \& Schwartz, G. E. (1990). Distress and restraint as superordinate dimensions of selfreported adjustment: A typological perspective. Journal of Personality, 58, 381417.
[59]. Zarrett, N., \& Eccles, J. (2006). The passage to adulthood: Challenges of late adolescence. In S. Piha \& G. Hall (Eds.), New Directions for Youth Development (pp. 13-28): Wiley Subscription Services, Inc.
[60]. Zook, P., \& Repinski, S. (2014). Factors Affecting Scholastic Performance in School Children. IOSR Journal of Dental and Medical Sciences, 15(7), 47-53.

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[^0]:    Tumusiime Joselyne, et. al. "Effect of Girl Child Puberty Factors on Academic Performance in Nine Years Basic Education Schools in Rwanda." IOSR Journal of Humanities and Social Science (IOSRJHSS), 26(10), 2021, pp. 22-32.

